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PRATHAMA GRAMIN BANK PO EXAM 2011-
NUMERICAL ABILITY QUESTION PAPER

Directions—(Q. 1-5) What will come in place of question-mark (?) in the following questions ?

1. $\sqrt{5^2 \times 41 \times 5 - 17^2 - 75} = ?$

- (A) 69 (B) 61
(C) 71 (D) 79
(E) None of these

2. $(2 \cdot 25)^2 \div (3 \cdot 375)^4 \times (1 \cdot 5)^5 = (1 \cdot 5)^? - 7$

- (A) 6 (B) 2
(C) 4 (D) 0
(E) None of these

3. $(\sqrt{5} - \sqrt{6})^2 + (\sqrt{3} + \sqrt{10})^2 = (?)^3 - 40$

- (A) 8 (B) 4
(C) 3 (D) 6
(E) None of these

4. $(\sqrt{125 \cdot 44} \times 85 \div 8) - 11 = (?)^2 \div 3$

- (A) $2\sqrt{6}$ (B) $\sqrt{6}$
(C) 12 (D) 18
(E) 6

5. $68\% \text{ of } \sqrt{2916} \times 25 = ? + 189$

- (A) 728 (B) 718
(C) 729 (D) 739
(E) None of these

Directions—(Q. 6-10) What approximate value will come in place of question mark (?) in the following questions ? (You are not expected to calculate the exact value.)

6. $38\% \text{ of } 568 + 16\% \text{ of } 1654 - 212 = ?$

- (A) 200 (B) 220
(C) 270 (D) 330
(E) 390

7. $8787 \div 77 \times 92 = ? \times 13$

- (A) 720 (B) 780
(C) 840 (D) 810
(E) 750

8. $\sqrt{7778} \times \sqrt{4678} \div \sqrt{689} = ?$

- (A) 380 (B) 410
(C) 280 (D) 230
(E) 350

9. $(56 \cdot 15)^2 - (24 \cdot 9)^2 - (11 \cdot 9)^2 = ?$

- (A) 2390 (B) 2460
(C) 2550 (D) 2680
(E) 2240

10. $\frac{579}{35} \div \frac{17}{2323} \times \frac{156}{249} = ?$

- (A) 1360 (B) 1420
(C) 1480 (D) 1560
(E) 1680

Directions—(Q. 11-15) What will come in place of question mark (?) in the following number series ?

11. 24, 24, 28, 46, 94, (?)

- (A) 186 (B) 196
(C) 194 (D) 184
(E) None of these

12. 18, 29, 110, 453, 1078, (?)

- (A) 1321 (B) 1342
(C) 1312 (D) 1365
(E) None of these

13. 756, 535, 348, 195, 76, (?)

- (A) 17 (B) -8
(C) 12 (D) -9
(E) None of these

14. 13, 22, 43, 76, 121, (?)

- (A) 175 (B) 184
(C) 181 (D) 178
(E) None of these

15. $\frac{7}{9}, \frac{2}{3}, \frac{5}{3}, \frac{14}{9}, \frac{23}{9}, (?)$

- (A) $\frac{23}{6}$ (B) $\frac{22}{9}$
(C) $\frac{32}{9}$ (D) $\frac{35}{6}$
(E) None of these

Directions—(Q. 16-20) In the following questions two equations numbered I and II are given. You have to solve both the equations and give answer if—

- (A) $x > y$
(B) $x \geq y$
(C) $x < y$
(D) $x \leq y$

(E) $x = y$ or the relationship cannot be established

16. I. $\frac{(5)^2}{\sqrt{x}} - \frac{19}{\sqrt{x}} = (x)^{3/2}$

II. $y^4 - \frac{(2)^{9/2}}{\sqrt{y}} = 0$

17. I. $3x^2 + 16x + 21 = 0$

II. $y^2 + 7y + 12 = 0$

18. I. $\frac{7}{17} - \frac{13}{34} = \frac{\sqrt{x}}{102}$

II. $\frac{\sqrt{y}}{12} + \frac{\sqrt{y}}{6} = \frac{1}{2\sqrt{y}}$

19. I. $(1024)^{1/2}x + (512)^{1/3} = 232$

II. $(729)^{1/3}y + 1163 \cdot 5 = 1231$

20. I. $5 \times \sqrt{169}x^2 - 585 = 0$

II. $6 \times \sqrt{324}y + 324 = 0$

21. Distance between two railways stations A and B is 1536 km. A train covers a journey between A to B at the uniform speed of 60 km/hr and returns from B to A at the uniform speed of 40 km/hr. What is the average speed of the train during the whole journey ?

- (A) 48 km/hr (B) 50 km/hr
(C) 52 km/hr (D) 46 km/hr
(E) None of these

22. What is the value of thirty eight per cent of seven-twelfth of twice the cube of fifteen ?

- (A) 1496-25 (B) 1478-50
(C) 1649-25 (D) 1748-50
(E) None of these

23. There are four numbers A, B, C and D. Sum of A and B is 150, B and C is 185, C and D is 230. B is 25 less than C. What is the total sum of A, B and D together ?

- (A) 270 (B) 285
(C) 260 (D) 275
(E) None of these

24. A man divided ₹ 9,600 among his four sons, three daughters

and wife. Each daughter got twice the amount given to each son. His wife got ₹ 300 less than amount given to each son. How much total amount did all the three daughters get ?

- (A) ₹ 4,500
(B) ₹ 5,400
(C) ₹ 2,700
(D) Cannot be determined
(E) None of these

25. What will be the least number which when divided by 5, 6, 7 and 8 leaves remainder 3 but when divided 9 leaves no remainder ?

- (A) 1674
(B) 1692
(C) 1683
(D) Cannot be determined
(E) None of these

26. The ratio between the three angles of a quadrilateral is 6 : 7 : 8 respectively. The value of the fourth angle of the quadrilateral is 108° . What is the difference between the **largest** and the **smallest** angles of the quadrilateral ?

- (A) 24° (B) 26°
(C) 42° (D) 32°
(E) None of these

27. What is the longest rod that can be placed in a room which is 7 metre long, 9 metre broad and $\sqrt{39}$ metre high ?

- (A) 15 metre
(B) 13 metre
(C) 17 metre
(D) Cannot be determined
(E) None of these

28. 15 men can make a carpet of 60 metre in 8 days. What length of similar carpet can be made by 24 men in 3 days ?

- (A) 42 metre
(B) 36 metre
(C) 48 metre
(D) Cannot be determined
(E) None of these

29. Ankur's present age is 12 years more than Raman's age 5 years ago. Presently Raman is 24 years older than Raju's present age who is 12 years younger than

Amit. If Amit's present age is 42 years. What is Ankur's age 3 years ago ?

- (A) 56 years (B) 64 years
(C) 61 years (D) 58 years
(E) None of these

30. Suman purchased an item of ₹ 72,000 and sold it at a loss of 27 per cent. With that amount she purchased another item and sold it at a gain of 30 per cent. What is her overall profit/loss ?

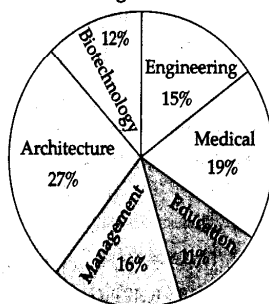
- (A) Loss of ₹ 4,280
(B) Gain of ₹ 3,672
(C) Gain of ₹ 4,280
(D) Loss of ₹ 3,762
(E) None of these

Directions—(Q. 31–35) Study the following pie-chart and answer the following questions—

Percentage-wise distribution of faculty in six different departments

Total number of Faculties = 7200

Percentage of Faculties



31. 25 per cent of the number of faculties in Medical department are females. What is the number of male faculty in Medical department ?

Directions—(Q. 36–40) Study the table carefully to answer the questions that follow—

Number of Students (in thousands) Admitted in Five Different Universities in Five Different Years

Years	University									
	A		B		C		D		E	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2005	3.4	1.5	6.1	3.4	4.2	4.1	5.3	4.8	6.2	4.2
2006	4.2	3.2	5.4	3.2	6.2	3.3	8.5	7.9	7.6	5.5
2007	7.8	4.5	8.8	5.5	6.8	2.8	9.2	4.2	8.7	6.8
2008	4.6	3.9	7.3	6.9	2.6	2.2	12.6	10.4	9.9	8.8
2009	5.8	2.2	8.2	7.2	5.9	6.3	14.5	14.2	10.8	9.2

- (A) 1018 (B) 1016
(C) 1036 (D) 1028
(E) None of these

32. One-third the number of faculty of Architecture department has left. What is the number of remaining faculty in Architecture department ?

- (A) 678 (B) 1248
(C) 648 (D) 1296
(E) None of these

33. Difference between the total number of faculties in Management and Education department together and the number of faculties in Engineering department is exactly equal to number of faculties of which department ?

- (A) Medical
(B) Architecture
(C) Biotechnology
(D) Engineering
(E) None of these

34. Number of faculties in Engineering department is **approximately** what percentage of total number of faculties in Management and Architecture departments together ?

- (A) 21 (B) 29
(C) 39 (D) 35
(E) 25

35. What is the average number of faculties in Medical, Education and Biotechnology departments together ?

- (A) 1028 (B) 1040
(C) 1008 (D) 1080
(E) None of these

36. What was the total number of females in the year 2006 in all the Universities together ?

(A) 23200 (B) 23100
(C) 23420 (D) 24300
(E) None of these

37. What was the **approximate** percentage decrease in the number of male students admitted in the University-B in the year 2008 as compared to the previous year ?

(A) 27 (B) 14
(C) 23 (D) 11
(E) 17

38. Number of female students admitted in the University-D in the year 2006 was **approximately** what percentage of the total number of students admitted in the University-C in the year 2005 ?

(A) 75 (B) 80
(C) 85 (D) 90
(E) 95

39. What was the respective ratio between the number of males in University-C in the year 2005 and the number of females in University-B in the year 2008 ?

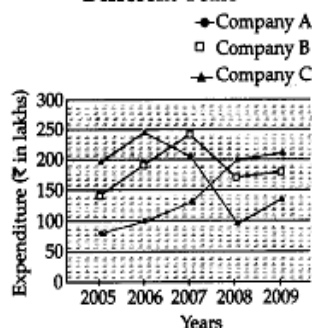
(A) 15 : 24 (B) 13 : 23
(C) 14 : 25 (D) 14 : 23
(E) None of these

40. In which year was the difference between the number of male and female students admitted **second lowest** in University-E ?

(A) 2005 (B) 2006
(C) 2007 (D) 2008
(E) 2009

Directions—(Q. 41–45) Study the following graph carefully to answer the questions that follow—

Expenditure (₹ in lakhs) of three different Companies in Five Different Years



41. What was the average expenditure of Company-C over all the years together ?

(A) ₹ 190 lakhs
(B) ₹ 120 lakhs
(C) ₹ 180 lakhs
(D) ₹ 150 lakhs
(E) None of these

42. What was the difference between the total expenditure of Company-B in the year 2006 and 2008 together and the total expenditure of Company-C in the year 2007 and 2009 together ?

(A) ₹ 10,00,000
(B) ₹ 1,00,000
(C) ₹ 1,00,00,000
(D) ₹ 10,00,00,000
(E) None of these

43. What was the respective ratio between the expenditure of Company-A in the year 2009 and the expenditure of Company-B in the year 2005 ?

(A) 5 : 3 (B) 3 : 4
(C) 3 : 5 (D) 3 : 2
(E) None of these

44. In which year was the total expenditure by all the three companies together **second highest** ?

(A) 2005 (B) 2006
(C) 2007 (D) 2008
(E) 2009

45. Total expenditure of all the three companies together in the year 2006 was what percentage of the total expenditure of Company-A over all the years together ?

(A) 75 (B) 72
(C) 65 (D) 60
(E) None of these

Directions—(Q. 46–50) Study the information carefully to answer the questions that follows.

In a school there are 1250 students. All the students are on tour to five different places viz., Mumbai, Chandigarh, Jalandhar, Amritsar and Delhi. Out of the total students forty four per cent are girls. Two-fifth of the total girls are visiting Mumbai. Twelve per cent of the total number of boys are visiting Delhi. Number of girls visiting Jalandhar is half the number of boys visiting Delhi. Two-

seventh of the total number of boys are visiting Amritsar. No boy is visiting Mumbai. Total number of students visiting Jalandhar is 400. Number of girls visiting Chandigarh is equal to the number of boys visiting Chandigarh. Equal number of girls are visiting Amritsar and Delhi.

46. What is the respective ratio between the number of girls visiting Jalandhar and the number of boys visiting Delhi ?

(A) 1 : 3 (B) 1 : 2
(C) 2 : 3 (D) 3 : 2
(E) None of these

47. What is the average number of girls visiting Chandigarh, Amritsar, Jalandhar and Delhi together ?

(A) 65.5 (B) 81.5
(C) 66 (D) 85.2
(E) None of these

48. Number of boys visiting Amritsar is **approximately** what per cent of the total number of girls visiting Mumbai and Chandigarh together ?

(A) 79 (B) 72
(C) 83 (D) 87
(E) 91

49. What is the total number of girls visiting Mumbai and boys visiting Chandigarh together ?

(A) 266 (B) 292
(C) 274 (D) 278
(E) None of these

50. In which of the following places is the difference between the number of boys and girls visiting the place, **second lowest** ?

(A) Mumbai (B) Chandigarh
(C) Jalandhar (D) Amritsar
(E) Delhi